REFERENCES

1. Kim, Arnold (October 12, 2011). "Scott Forstall's Personality, Origins of iOS, and Lost iPhone 4 Prototype".

2. Eadicicco, Lisa (January 9, 2017). "Watch Steve Jobs Unveil the First iPhone 10 Years Ago Today".

Москаленко Андрій Миколайович
Київський національний університет технологій та дизайну
(м. Київ)
Науковий керівник – Телев'як І.І.

COMPUTER TRAINING AND ARTIFICIAL INTELLIGENCE

Computers, or rather algorithms, based on continuously growing computing power, plays chess and checkers better than people. They are very good at flying planes and driving cars. They were able to pass the Turing test, convincing the judges of their "humanity". Each year the power of computers is doubled and they can do more and more things to replace people in many areas. Nowadays there are tons of algorithms for computer training. I'll talk about the two most famous - Neural Networks and the Genetic Algorithm.

Artificial neural networks are computing systems inspired by the biological neural networks that constitute animal brains. Such systems "learn" tasks by considering examples, generally without task-specific programming. For example, in image recognition, they might learn to identify images that contain cats by analyzing example images that have been manually labeled as "cat" or "no cat" and using the results to identify cats in other images. They do this without any a priori knowledge about cats, e.g., that they have fur, tails, whiskers and cat-like faces. Instead, they evolve their own set of relevant characteristics from the learning material that they process.

A genetic algorithm is inspired by Charles Darwin's theory of natural evolution. This algorithm reflects the process of natural selection where the fittest individuals are selected for reproduction in order to produce offspring of the next generation. The process of natural selection starts with the selection of fittest individuals from a population. They produce offspring which inherit the characteristics of the parents and will be added to the next generation. If parents have better fitness, their offspring will be better than parents and have a better chance at surviving. This process keeps on iterating and at the end, a generation with the fittest individuals will be found.

These algorithms and their combinations allow you to solve very difficult tasks, but these are just childish steps to the technological form of life. According to an American physicist and cosmologist Max Tegmark, life has three stages – biological, cultural and technological. The first stage of life is an «animal stage». Animals can replicate themselves and have some kind of a program for example, many bacteria have a sensor measuring the sugar concentration in the liquid around them and can swim using propeller-shaped structures called flagella. The hardware linking the sensor to the flagella might implement the following simple but useful algorithm: "If my sugar concentration sensor reports a lower value than a couple of seconds ago, then reverse the rotation of my flagella so that I change direction." [1, p.37,38] The second stage of life is a human. Unlike animals, we can choose which program to install in our brain for example, we can choose which language to study English or Spanish. But we cannot choose our «hardware» or genes (DNA). The third stage of life will be able to choose and upgrade its hardware. Many AI researchers think that third stage of life may arrive during the coming century, perhaps even during our lifetime, spawned by progress in AI. What will happen, and what will this mean for us?

When human will create machine that can far surpass all the intellectual activities of any man however clever the third stage of life will begin. Since the design of machines is one of these intellectual activities, an ultraintelligent machine could design even better machines; there would then unquestionably be an

'intelligence explosion,' and the intelligence of man would be left far behind. That ultraintelligent machine will cause a great impact on economy, culture, medicine etc. It will be able to read tons of books and create new ones in few minutes. It will certainly unit all counties and upgrades our life to the next level. Thus the first ultraintelligent machine is the last invention that man need ever make.

REFERENCES

1. Max Tegmark, «Life 3.0 Being Human in the Age of Artificial Intelligence», August 2017, p.37-38
2. Nick Bostrom, «Superintelligence: Paths, Dangers, Strategies»,July 2014,p.19
3. Artificial neural networks [Електронний ресурс] https://en.wikipedia.org/wiki/Artificial_neural_network.
4. Introduction to Genetic Algorithms [Електронний ресурс] https://towardsdatascience.com/introduction-to-genetic-algorithms-including-example-code-e396e98d8bf3.

Mozjuk Tetjana
Hochschullehrerin des Lehrstuhls für Fremdsprachen
Kiewer Nationaluniversität für Technologien und Design
(Kiew)

BILDUNG DER PÄDAGOGISCHEN KULTUR DER HOCHSCHULLEHRER

Die neuen Ausbildungstrends, die um die Wende des zweiten und dritten Jahrtausends entstanden, das Aufkommen neuer Bildungsparadigmen, ein neues System sozialer Werte und Bildungsziele, der Dialog mit der Kultur des Menschen als Schöpfer und Subjekt, der sich kulturell selbst erziehen kann, weckten ein besonderes Interesse an der Untersuchung des Phänomens "pädagogische Kultur" und ihrer Komponenten. Mit dem Problem der pädagogischen Kultur des